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Title of Document

Determination of elemental composition of shale rocks by laser induced breakdown spectroscopy (LIB

Determination of carbon isotopes in coal by laser ablation molecular isotope spectrometry (LAMIS)

Improved Modeling of Naturally Fractured Reservoirs by Quantitatively Handling Flow Convergence int

Application of Laser Induced Breakdown Spectroscopy (LIBS) in analysis of groundwater and out crop s

Operating experience of a 50kWth methane chemical looping reactor

APPLICATIONS OF TRIBOLOGY AND FRACTURE MECHANICS TO DETERMINE WEAR AND IMPACT ATTRITI

ESTIMATION OF SOLIDS DISPERSION IN A BUBBLING FLUIDIZED BED FROM AREA MEASUREMENTS OF

Modeling Pressure Changes due to Migration of Fluids into the Above Zone Monitoring Interval of a Ge

Recovery of Rare Earth Elements from Coal and Coal Byproducts: What Have We Learned from the US

Numerical Error Estimation for Two-Fluid Simulations: A Case Study with Fluidized Beds

CFD modeling of the fuel reactor in NETL's 50 kw chemical looping facility

Human Health and Environmental Impact Assessment of Cost-Optimal Shale Gas Water Management

PARAMETRIC STUDIES OF HYDRAULIC FRACTURE PROPAGATION IN SHALE RESERVOIRS: Evaluation of S

Size, Density and Electromagnetic Separations of Coal Fly Ash for Rare Earth Element Enrichment

Viscosity Measurements of Two Potential Deepwater Viscosity Standard Reference Fluids at High Temp

Understanding phenomenon that impact multiphase fluids for CO2 sequestration

Particulate Solid Attrition in CFB Systems – An Assessment for Emerging Technologies

Reduction for Hematite Chemical Looping Combustion of Methane modeling with Barracuda

Hydrodynamic characteristics of flat-base spouted fluid bed

Development of First Principles Attrition Model to Determine Solid Makeup Cost of Novel CFB Technolo

Evaluation of a Rapid Airborne Method for Locating Legacy Wells in Pennsylvania

Hydrodynamic Response of Sheared Shale Fractures

A computational and experimental study of a High Velocity Oxy-Fuel System for MHD Generation syst

Systems Analyses of Direct Power Extraction and Advanced Ultra-Supercritical Power Plants

Design and Operation of a 10 MWe Supercritical CO2 Recompression Brayton Power Cycle

Surface seismic monitoring of hydraulic fracturing activity in Pennsylvania and West Virginia

Exploring the Temperature and Pressure Dependence of the Viscosities of Two Potential Deepwater Vis

The effect of riser end geometry on gas-solid hydrodynamics in a CFB riser operating above fast fluidi

Applications of tribology to determine attrition by wear of particulate solids in CFB systems

Optimal Scheduling of Advanced Energy Plants with CO2 Capture

Fundamentals of rotating fluidized beds and application to particle separation

Operating Experience of a 50kWth Methane Chemical Looping Reactor

Development of a Carbon Stripper Particle Separation System for Chemical Looping Applications

Non-intrusive Uncertainty Quantification of Computational Fluid Dynamics Simulations of a Bench-sca

The Marcellus Shale Energy and Environment Laboratory (MSEEL)

In-situ measurements of calcium carbonate dissolution under rising CO2 pressure using underwater la

Greenhouse gas molecule CO2 detection using a capacitive micromachined ultrasound transducer (CM

Development and Verification of a Dynamic Model for a Cold Flow Circulating Fluidized Bed

Chapter 2: Greenhouse Gases, and Their Role in Global Warming

Development of a Lab-Scale Experimental Testing Platform for Rotating Detonation Engine Inlets

Polymeric and Small Molecule Thickeners for CO2, Ethane, Propane, and Butane for Improved Mobility

The successful development of shale gas resources in the United States

Computational and Experimental Study of Gas-Liquid Fluid Flows through Flow Cells

Computational Modeling of Fluid and Particle Flows in Rock Fractures

Influence of CO2 pressure on the emission spectra and plasma parameters in underwater laser-induce

Laser-Induced Breakdown Spectroscopy: Application to Powder Samples

Dissolution of mineral carbonates with increasing CO2 pressure and the implications for carbon seque

Fracture Shearing Impact on Fluid Flow

NETL Fundamentals of Shale Work

A novel approach to turbulent multiphase flow imaging: Flow in 3D printed karstic conduits

CFPD analysis of a vortexing bed riser system

L-Valve Investigation for Chemical Looping Reactor Implementation

Experimental Study on the Effects of Cone Angle and Gas Inlet Diameter on the Minimum Spouting Ve

Coarse grained particle method for simulation of liquid-solids reacting flows

Modeling and Simulation of Rare Earth Element Extraction by Ion Exchange Reaction in Batch Reactor

Impacts of variability in hydrate distribution on the mechanical behavior
hydrate bearing sediments

Pressure and Saturation Evolution on Injecting CO2: Impact of Reservoir Size, Heterogeneity and Injec

Comparison of Pore-Network and Lattice Boltzmann Models for Pore-Scale Modeling of Geological Stor

Subsurface trend analysis, a multi-variate geospatial approach for evaluation of geologic properties a

Geophysical and Geochemical Aspects of Pressure and CO2 Saturation Modeling due to Migration of F

Spatial and Temporal Monitoring Resolutions for CO2 Leakage Detection at Carbon Storage Sites

Probabilistic Assessment of CO2 Leakage Detection Using 3D Surface Seismic Monitoring Two-Way Tra

Probabilistic Assessment of Above Zone Pressure Predictions at a Geologic Carbon Storage Site

DYNAMIC PROCESS MODEL OF A MULTI-STAGE CENTRIFUGAL COMPRESSOR FOR USE IN A SUPERCRITI

Methane Emissions from Abandoned Oil and Gas Wells in Western Pennsylvania

Atmospheric gas concentrations in the pre- and post- production phases of an unconventional oil and

Air quality and greenhouse gas impacts from Unconventional Natural Gas (UNG) development

Comparison of Pore-Network and Lattice Boltzmann Models for Pore-Scale Modeling of Geological Stor

A Strategy for the Development of Stranded Gas in Shale Plays

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OSTI Keywords	OSTI Subject Area(s)
Shale analysis, laser induced breakdown spectroscopy, LIBS	36 - MATERIALS SCIENCE 54 - ENVIRONMENTAL SCIENCES 58 - GEOSCIENCES
Coal isotope analysis, LAMIS, carbon isotope, laser ablation molecular isotope spectrometry	36 - MATERIALS SCIENCE 54 - ENVIRONMENTAL SCIENCES 58 - GEOSCIENCES
fractured reservoir flow, wellbore flow	03 - NATURAL GAS 58 - GEOSCIENCES
laser induced breakdown spectroscopy, LIBS, groundwater quality, marcellus shale	54 - ENVIRONMENTAL SCIENCES 58 - GEOSCIENCES
chemical looping, methane carrier reduction	01 - COAL, LIGNITE, AND PEAT 20 - FOSSIL-FUELED POWER PLANTS 42 - ENGINEERING 54 - ENVIRONMENTAL SCIENCES

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Multiphase flow, Numerical error analysis	01 - COAL, LIGNITE, AND PEAT

Chemical Looping, CFD Modeling, Hematite Reduction	01 - COAL, LIGNITE, AND PEAT 20 - FOSSIL-FUELED POWER PLANTS
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Viscosity Standard Reference Fluids, High Temperature, High Pressure, Krytox, TOTM	02 - PETROLEUM
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